Title (en)

SAFETY FUNCTION FOR A TRANSPORT SYSTEM

Title (de)

SICHERHEITSFUNKTION FÜR EIN TRANSPORTSYSTEM

Title (fr)

FONCTION DE SÉCURITÉ POUR UN SYSTÈME DE TRANSPORT

Publication

EP 3831639 A1 20210609 (DE)

Application

EP 20211133 A 20201202

Priority

AT 510532019 A 20191203

Abstract (en)

[origin: CA3101362A1] Abstract In order to ensure particularly good protection of individuals in an electromagnetic transport system (2), a safety area (S) is provided in a transport area (20). Furthermore, a safety function is provided which, in accordance with a predetermined safety requirement level, ensures that the transport unit (1) reaches the safety area (S) at a speed (v) less than or equal to a safety speed (v_S) and/or with a transport unit force (F1) less than or equal to a safety force (F_S) and/or a transport unit energy (Ei) less than or equal to a safety energy (F_S), or prevents the transport unit (1) from reaching the safety area (S). Date Recue/Date Received 2020-12-01

Abstract (de)

Im in einem elektromagnetischen Transportsystem (2) einen besonders guten Schutz von Individuen zu gewährleisten, ist in einem Transportbereich (20) ein Sicherheitsbereich (S) vorgesehen. Weiters ist eine Sicherheitsfunktion vorgesehen, welche entsprechend einer vorgegebenen Sicherheitsanforderungsstufe sicherstellt, dass die Transporteinheit (1) den Sicherheitsbereich (S) mit einer Geschwindigkeit (v) kleiner gleich einer Sicherheitsgeschwindigkeit (v_S) und/oder mit einer Transporteinheitskraft (F₁) kleiner gleich einer Sicherheitskraft (F_S) und/oder einer Transporteinheitsenergie (E₁) kleiner gleich einer Sicherheitsenergie (F_S) erreicht oder verhindert, dass die Transporteinheit (1) den Sicherheitsbereich (S) erreicht.

IPC 8 full level

B60L 3/00 (2019.01); **B60L 3/08** (2006.01); **B60L 7/00** (2006.01); **B60L 13/03** (2006.01); **B60L 15/00** (2006.01); **B60L 15/08** (2006.01); **B60L 15/20** (2006.01); **H02P 3/22** (2006.01); **H02P 3/26** (2006.01)

CPC (source: CN EP KR US)

B60L 3/0007 (2013.01 - EP); **B60L 3/0023** (2013.01 - EP); **B60L 3/0092** (2013.01 - EP); **B60L 3/08** (2013.01 - EP); **B60L 7/003** (2013.01 - EP); **B60L 13/03** (2013.01 - EP); **B60L 15/005** (2013.01 - EP); **B60L 15/08** (2013.01 - EP); **B60L 15/2009** (2013.01 - EP); **B65G 43/06** (2013.01 - US); **B65G 43/08** (2013.01 - KR); **B65G 54/02** (2013.01 - CN KR US); **G05D 1/0214** (2024.01 - US); **G05D 1/0223** (2024.01 - US); **H02K 41/02** (2013.01 - CN); **H02K 41/031** (2013.01 - KR); **H02P 3/02** (2013.01 - CN); **H02P 3/18** (2013.01 - KR); **H02P 25/06** (2013.01 - CN EP KR); **H02P 25/064** (2016.02 - US); B60L 2200/44 (2013.01 - EP); B60L 2240/12 (2013.01 - EP); B60L 2240/16 (2013.01 - EP); B60L 2240/421 (2013.01 - EP); B60L 2240/423 (2013.01 - EP); Y02P 90/60 (2015.11 - EP); Y02T 10/64 (2013.01 - EP); Y02T 10/72 (2013.01 - EP)

Citation (applicant)

- US 9202719 B2 20151201 - LU XIAODONG [CA], et al
- US 2012193172 A1 20120802 - MATSCHEKO GERHARD [DE], et al
- US 2006220623 A1 20061005 - ANDRUZZI JOSEPH M [US], et al
- AT 518721 A1 20171215 - BERNECKER + RAINER INDUSTRIE-ELEKTRONIK GES M B H [AT]
- AT 519238 A4 20180515 - B & R IND AUTOMATION GMBH [AT]

Citation (search report)

- [XYI] EP 3202612 A1 20170809 - BERNECKER+RAINER INDUSTRIE-ELEKTRONIK GES MBH [AT]
- [XI] DE 102015102236 A1 20160818 - BECKHOFF AUTOMATION GMBH [DE]
- [XP] EP 3653428 A1 20200520 - B & R IND AUTOMATION GMBH [AT]
- [Y] WO 2019075193 A1 20190418 - VELOCITY MAGNETICS INC [US]
- [A] WO 9200862 A1 19920123 - UTDC INC [CA]
- [A] DE 69011744 T2 19950323 - MAZDA MOTOR [JP]
- [A] US 5127599 A 19920707 - VERAART PIERRE [CA]
- [A] WO 9109750 A1 19910711 - UTDC INC [CA]

Cited by

WO2023099227A1; EP4191352A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3831639 A1 20210609; CA 3101362 A1 20210603; CN 113014058 A 20210622; JP 2021090343 A 20210610; KR 20210070217 A 20210614; US 11616463 B2 20230328; US 2021167713 A1 20210603

DOCDB simple family (application)

EP 20211133 A 20201202; CA 3101362 A 20201201; CN 202011403791 A 20201202; JP 2020195105 A 20201125; KR 20200166678 A 20201202; US 202017109923 A 20201202